Problem E: The White Queen's Impossibilities

Tweedledee and Tweedledum disappeared suddenly and Alice found herself alone again when a shawl came tumbling down the forest because of the wind. It was the White Queen's shawl, which Alice returned to her as they struck up a conversation.

Figure 1: Alice helping the White Queen with her hair

Alice learned that the White Queen has some extraordinary abilities, such as a memory that works in two directions: backwards into the past, and forward into the future! Not only that, but also the Queen was an expert on believing impossible things. At some point during their talk, Alice says to the Queen: "one can't believe impossible things," to which the Queen replies "I daresay you haven't had much practice. When I was your age, I always did it for half-an-hour a day. Why, sometimes I've believed as many as six impossible things before breakfast."

As a matter of fact, the Queen was being modest about her ability to believe in impossible things. Due to her ability to remember things from the future, she can actually recall a large number of impossible things that she can choose to believe in on any given day.

Let's say there are **n** impossible things that the White Queen can remember, and she chooses a certain number of those things to believe each day during a period of **k** days. We will denote the number of impossible things that the Queen believes in on the ith day as T_i. The Queen wants to believe a certain number of impossibilities each day, such that for any pair of days (i, j) the difference $|T_i - T_j|$ is never greater than 1. How many different valid arrangements are there for the White Queen to believe the n impossible things during the k days?

For example, if $n = 3$ and $k = 2$, then there are 6 valid arrangements, enumerated in the table below (the 3 impossible things are denoted A, B and C):

Alternative	Day 1	Day 2
1	A	B, C
2	B	A, C
3	C	A, B
4	A, B	C
5	A, C	B
6	B, C	A

Input

Input starts with a positive integer **T**, that denotes the number of test cases ($T \leq 1000$).

Each test case consists of two integer numbers **n** and **k**, which represent the number of impossible things and the number of days, respectively.

$1 \leq n, k \leq 10^6$

Output

For each test case, print the case number, and then the number of valid arrangements according to the constraints explained above. Print the answer modulo 1000000007.

Sample Input

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3
3 2
1 2
7 3
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Output for Sample Input

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Case 1: 6
Case 2: 2
Case 3: 630
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